

WILDLIFE MANAGEMENT UNIT 25B - PLATEAU, THOUSAND LAKE MOUNTAIN

Boundary Description

Wayne, Emery, and Sevier Counties - Boundary begins at Highway SR-24 and Highway SR-72; north on SR-72 to Interstate 70; east on I-70 to Cainesville road; south on this road to SR-24; west on SR-24 to SR72 and beginning point.

Unit Description

The Thousand Lake Wildlife Management unit is part of the large management unit 25 - Plateau. This unit is divided into three sub units, Fish Lake (25A), Thousand Lake (25B), and Boulder Mountain (25C). Management unit 25B was named after Thousand Lake Mountain, a lava-capped plateau with numerous small natural lakes. This mountain reaches an elevation of 11,295 feet and overlooks Capital Reef National Park and the desert country east of the unit. At the extreme southeastern corner of the unit is the lowest point elevationally in the herd unit at Cainesville (about 4,100 feet). The vegetative composition varies greatly throughout the unit with respect to topographical relief and elevation. Cainesville averages about 185 frost-free days and 5 to 6 inches of rainfall a year, while Thousand Lake Mountain receives 25 to 30 inches of rainfall a year and averages only 20 to 40 frost-free days. Grazing, uranium exploration, and logging are the three uses that have had the most impact on the Thousand Lakes unit.

Grazing of cattle, horses, and sheep commenced with the settlement of the region in the 1860's. The range was open to anyone and was used from the time the snow melted enough in the spring to get livestock on the mountain, until the snow drove them off in the fall. Much of the east side, especially the Solomon Basin area, was used year-round by cattle. Because of the plentiful, well-dispersed water sources, the relatively flat mountain top was also heavily grazed each summer. This overgrazing resulted in soil compaction and soil loss at water sources, erosion problems, decreased water quality, and a decrease of the valuable grass-forb component in the vegetative community until nearly monotypic shrub types remained. The Forest Service has gradually increased grazing restrictions in order to allow the range to recover. Currently many areas are beginning to show improvements, but it will take a long time for the land to recover naturally.

Uranium prospectors have also left their mark on the land. Four-wheel drive vehicles and heavy equipment tracks crisscross the unit and are still quite visible.

Stands of ponderosa pine, Douglas-fir, and Engelmann spruce are found on the mountain with many areas having been logged in the past. Fire suppression has helped to accelerate succession of the high mountain aspen-meadow parklands toward climax stands of Engelmann spruce. Canopy closure in these spruce forests nearly eliminates all understory species, resulting in a significant loss of forage production. Timber sales and prescribed burns which open up the canopy and encourage resprouting of aspen would be necessary to retain sufficient acreage of the already limited big game summer range.

Despite human impacts, portions of Thousand Lake Mountain are under consideration for wilderness designation. However, gas and oil exploration is an ongoing activity and coal deposits in the Last Chance area have drawn proposals for both underground and strip mining. Also, Highway U-72 which forms the western boundary, has been paved and will now be maintained for year-round use. This will tend to encourage more recreation and tourism through the area.

The unit has good winter range with ample protective cover, large basins, draws, and open ridges. The upper limits of the normal winter range vary from 8,400 feet at the northern boundary to 9,000 feet on the south end of the mountain. The lower normal winter range limit is between 6,000 and 7,400 feet in elevation. At present, the winter range appears ample to support the deer and elk from the Thousand Lakes unit and also

many wintering deer from the adjacent Fish Lake unit. Solomon Basin, Sage Flat, Horse Valley, Sand Flat, Paradise Flat, and Lyman Slopes are all winter concentration areas.

Several different estimates of the size of the unit's big-game ranges can be found. Many of these estimates are discussed here. Huff and Blotter (1964) conducted the original survey of the area's deer ranges and reported 90,489 acres of winter range. Jense et al. (1985) quoted this estimate but rounded it off. Mann (1985) used the same figure to arrive at an estimate of 3,800 acres that needs to be acquired from the private sector and maintained to help maintain the deer herd. In the deer herd unit management plan, Bogedahl (1983) gave markedly different estimates of the range sizes. This project planimetered the boundaries of the winter range as drawn on the original base map by Huff and Blotter to arrive at an estimate of 103,733 acres.

Huff and Blotter (1964) inventoried the vegetation on the winter range in 1963. They reported acreage and cover density for three major vegetative types. Pinyon-juniper made up 73% of the winter range with about 9% cover for desirable browse species. The sagebrush and mixed browse types accounted for 10% and 4% of the winter range and had 19% and 18% of the cover respectively for the key browse species. Ponderosa pine, with a healthy understory of antelope bitterbrush, is located along the upper edge of the winter range between Water Canyon and Sand Creek.

The condition of the spring and summer range is the current management concern. As the snow begins to recede in the spring, deer seek green grasses and forbs which are very scarce on the heavily overgrazed spring ranges. At this time, the early green-up in the alfalfa and grain fields on private land near Loa, Fremont, Lyman and Torrey are very attractive to wildlife and depredation problems become serious. The DWR has been working in cooperation with the BLM and Forest Service on revegetation projects immediately above these private lands to provide spring forage and alleviate this problem. Most of the big game summer range is in fairly good condition and adequate for present needs, but it is limited in size and should be managed carefully to insure that the necessary quality and quantity of summer range is maintained in order to maintain herds at current levels. Small sage flats on top of the mountain which have been sprayed with 2,4-D, have displayed increased summer use by deer as forb and grass production increases. Limited use of these treatments in combination with logging and prescribed burns in spruce and aspen stands could be helpful in maintaining and improving the summer range.

Wildlife Management Unit Objectives

The current management plan is to achieve a target wintering population of 2,000 deer with a postseason buck to doe ratio of 15:100, with 30% of these bucks being 3 point or better. The objective for elk is to achieve a population of 4,800 wintering elk on sub units 25A - Fish Lake and 25B - Thousand Lake with a herd composition of 8 bulls to 100 cows with at least 4 of those bulls being 2 ½ years or older.

Trend Study Site Description

Forest Service, BLM, and DWR personnel met in August, 1985 to discuss range trend studies and to select critical areas of big game range where trend should be monitored. Five sites were chosen for permanent range trend studies on the herd unit. These studies; Thousand Lake (25B-1), Horse Valley (25B-2), Sage Flat (25B-3), Solomon Basin (25B-4), and Polk Creek (25B-5), were established in 1985. Another site, Little Deer Peak (25B-6), has been added to the Thousand Lake unit. It originally was from a neighboring unit, but was switched to Thousand Lake unit with the latest alignment of the management unit boundaries. All of these sites were reread in 1991 and 4 of the 6 sites were read in 1994. All 6 sites were revisited in 1999. In 2004, all sites were monitored, except for Thousand Lake (25B-1) due to poor access.

SUMMARY

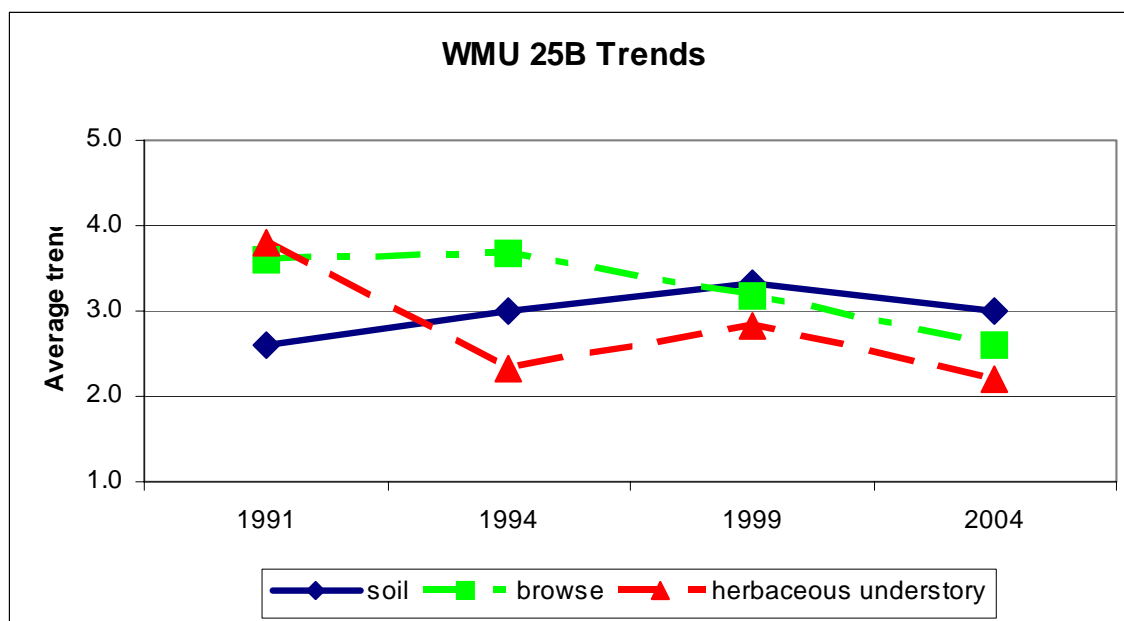
WILDLIFE MANAGEMENT UNIT 25B - THOUSAND LAKE

Five of the six trend studies were monitored on this unit in 2004. Thousand Lake (25B-1) was not monitored due to poor access. Soil trends for each site are stable, but in poor condition for most sites except Polk Creek. Browse trends are stable for the three Wyoming big sagebrush sites on this unit (Horse Valley, Sage Flat, and Little Deer Peak), which is generally contrary to many of the trends currently seen around the state. Browse trends for Solomon Basin and Polk Creek are slightly down due to increases in pinyon and juniper and other increaser species. The herbaceous trends are slightly down for each sites except for Little Deer Peak which had a stable trend. Drought conditions have resulted in reduced abundance of perennial grasses and forbs, which were already sparse in 1999 for most sites.

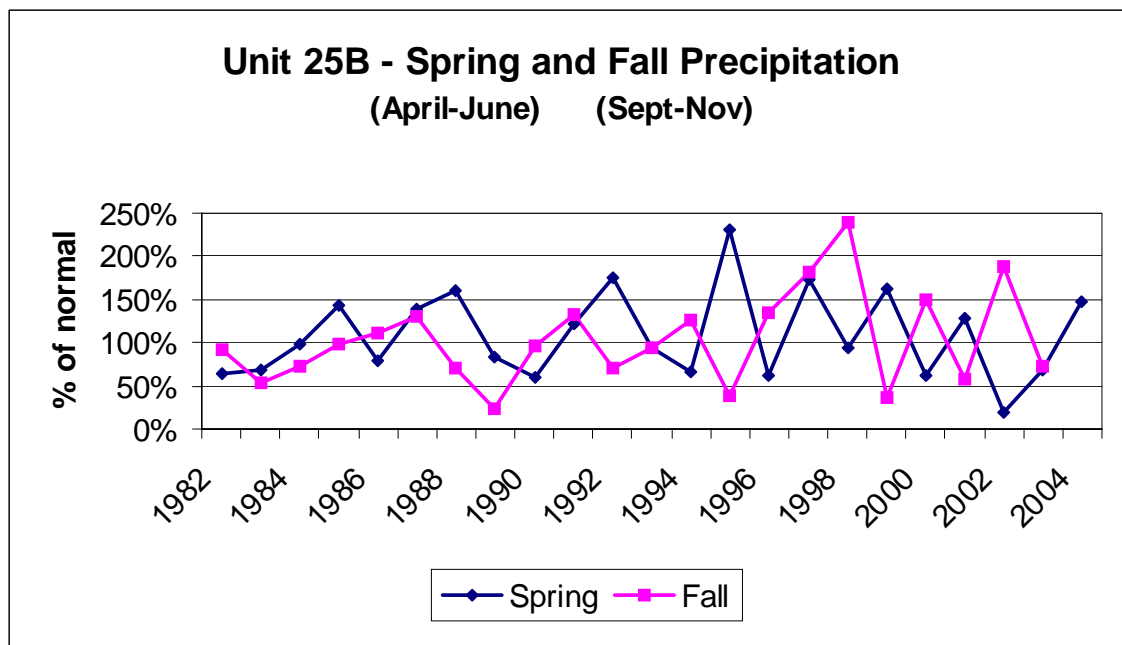
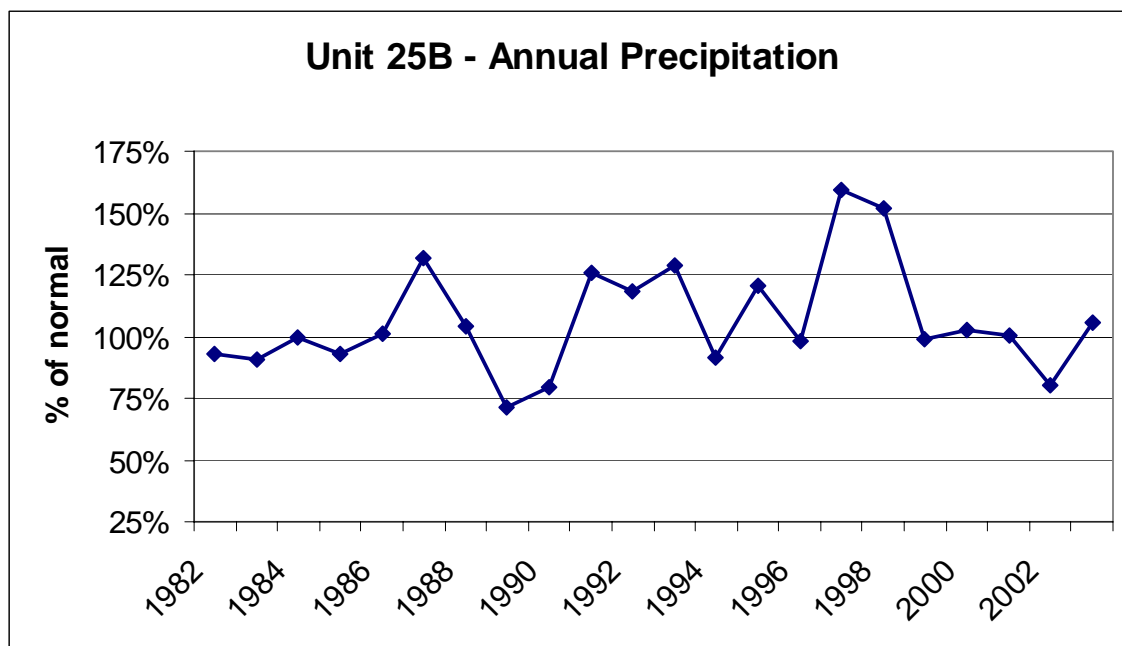
Many of these range trends are driven by precipitation patterns. Utah has been in a drought for the past five years. Data from three weather stations near this subunit (Loa, Salina, and Capitol Reef National Park) were analyzed to look at precipitation patterns since 1982 (Utah Climate Summaries 2004). Precipitation was averaged for each station and analyzed as percent of normal precipitation. Below normal precipitation is defined as less than 90% and drought as less than 75% of normal. Total annual precipitation was below normal in 2002 (80%), but was near normal or above for most of the last decade. Drought conditions were seen from 1989-1990. In 1997 and 1998, precipitation was near 150%. Seasonal distribution of precipitation was also analyzed for spring (April-June) and fall (September-November). Spring precipitation is important for cool season grasses and forbs, as well as shrubs that initiate growth during this period. Spring precipitation was only 20% of normal in 2002. 2000 and 2003 also had spring conditions that were very dry. Dry spring conditions like these may have led to declines in cool season herbaceous species. Warm season species, such as blue grama, have not been affected by the recent dry period.

Average Trends -- WMU 25B Thousand Lake

	1991	1994	1999	2004
Soil	2.6	3.0	3.3	3.0
Browse	3.6	3.7	3.2	2.6
Herb	3.8	2.3	2.8	2.2
	6 sites	4 sites	6 sites	5 sites



Precipitation graphs for Thousand Lake unit. Data is percent of normal precipitation averaged for 3 weather stations at Loa, Salina, and Capitol Reef National Park (Utah Climate Summaries 2004).



Trend Summary

	Category	1985	1991	1994	1999	2004
25B-1 Thousand Lake	soil	est	3	NR	3	susp
	browse	est	5	NR	3	susp
	herbaceous understory	est	4	NR	3	susp
25B-2 Horse Valley	soil	est	2	3	4	3
	browse	est	2	2	3	3
	herbaceous understory	est	4	2	3	2
25B-3 Sage Flat	soil	est	3	3	3	3
	browse	est	5	4	3	3
	herbaceous understory	est	4	3	3	2
25B-4 Solomon Basin	soil			est	3	3
	browse			est	3	2
	herbaceous understory			est	2	2
	Category	1985	1991	1994	1999	2004
25B-5 Polk Creek	soil	est	2	3	4	3
	browse	est	4	5	3	2
	herbaceous understory	est	3	2	3	2
25B-6 Little Deer Peak	soil	est	3	NR	3	3
	browse	est	2	NR	4	3
	herbaceous understory	est	4	NR	3	3

(1) = down, (2), slightly down, (3) = stable, (4) = slightly up, (5) = up,
 (est) = established, (n/a) = no trend, (susp) = suspended, (NR) = not read